



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

1/10/08

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------------|
| 10/526,996 | 09/19/2005 | Oliver Voelckers | 101185-21 | 7948 |
| 27387 7590 01/10/2008 NORRIS, MCLAUGHLIN & MARCUS, P.A. 875 THIRD AVE 18TH FLOOR NEW YORK, NY 10022 | | | EXAMINER HO, BAO QUAN T | |
| | | | ART UNIT 2629 | PAPER NUMBER |
| | | | MAIL DATE 01/10/2008 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/526,996 | VOELCKERS, OLIVER | |
| | Examiner | Art Unit | |
| | Bao-Quan T. Ho | 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of a certified copy of the GERMANY 102 43 223.6 application referred to in the oath or declaration or in an application data sheet. If this copy is being filed to obtain the benefits of the foreign filing date under 35 U.S.C. 119(a)-(d), applicant should also file a claim for such priority as required by 35 U.S.C. 119(b). If the application being examined is an original application filed under 35 U.S.C. 111(a) (other than a design application) on or after November 29, 2000, the claim for priority must be presented during the pendency of the application, and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior foreign application. See 37 CFR 1.55(a)(1)(i). If the application being examined has entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the claim for priority must be made during the pendency of the application and within the time limit set forth in the PCT and Regulations of the PCT. See 37 CFR 1.55(a)(1)(ii). Any claim for priority under 35 U.S.C. 119(a)-(d) or (f) or 365(a) or (b) not presented within the time period set forth in 37 CFR 1.55(a)(1) is considered to have been waived. If a claim for foreign priority is presented after the time period set forth in 37 CFR 1.55(a)(1), the claim may be accepted if the claim properly identifies the prior foreign application and is accompanied by a grantable petition to accept an unintentionally delayed claim for priority. See 37 CFR 1.55(c).

There is no mark indicating in the Oath/declaration for priority claimed.

Specification

2. The abstract of the disclosure is objected to because it is not a single paragraph.

Correction is required. See MPEP § 608.01(b).

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

4. **Claims 1-15** are objected to because of the following informalities:

Spelling of "manoeuvrable" is incorrect; the word should be spelt "maneuverable".

The use of parentheses in claims 1-15 are improper since parentheses are used only for the reference characters (see MPEP 608.01(m))

The word "it" in line 3 of claim 12 is improper since it is not clear what "it" is referred to, change "it" to be "the disc-like control element (11)".

The parentheses in line 4 of claim 12, "a soft spring force (less than 40 grams)", needs to be change to commas, for example "a soft spring force, less than 40 grams,".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. **Claims 5 and 7-9** recites the limitation "wherein the actuation disc (22) ..." in line 1 of each claims. There is insufficient antecedent basis for this limitation in the claim.

6. **Claim 11** recite the limitation "wherein the appliance casing (15) ..." in line 1 and "where the actuation disc (22)" in line 3. There is insufficient antecedent basis for this limitation in the claim.

7. **Claim 17** recite the limitation "wherein the highlighting of a character ..." in line 1. There is insufficient antecedent basis for this limitation in the claim.

8. **Claim 18** recite the limitation "wherein the character repertoire ..." in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1, 3, and 6** are rejected under 35 U.S.C. 102(b) as being anticipated by Bihusch, German Patent Application DE 41 10 015 A 1.

Regarding claim 1, Bihusch discloses a control element (computer mouse, English title) for electronic appliances for the actuation of sensors for selecting and invoking functions stored in an electronic memory and for the display of the selected functions by means of a cursor on an electronic appliance (Since the control element of Bihusch is a computer mouse, the mouse cursor is used to select and retrieve the data information stored in the memory), wherein the control element is shaped disc-like (Swingplatte shown in Fig. 10) and is tiltable around an axis (center of the Swingplatte) perpendicular to the surface of the control element and is equipped with sensors (strain gauges, page 1 under "operation characteristics" letter b) reacting to pulling and/or compressive stress at its underside (shown in Fig. 2), the control element being equipped at its underside with spring elements (two springs shown in Fig. 2) reacting to compressive stress arranged like a ring coaxially with a defined distance around the axis.

Regarding claim 3, Bihusch discloses in Fig. 10 wherein the control element exhibits an outline similar to the area of a circle.

Regarding claim 6, Bihusch discloses in Fig. 10 wherein the control element exhibits a smooth surface.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 12-13 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kehlstadt et al. (hereafter referenced as Kehlstadt), US Patent 6,879,316.

Regarding claim 12, Bihusch discloses a method to actuate a sensor by means of a disc-shaped, fixed control element that is tiltable around an axis (center of the Swingplatte) perpendicular to the surface, wherein a light pressure with a finger onto the edge of the disc-like control element moves it against a soft spring force (two springs shown in Fig. 2) a bit downside, so that the perpendicular of the disc-shaped control element is slightly moved into the direction of the actuation, this tilt being evaluated by means of force sensors (strain gauges, page 1 under "operation characteristics" letter b) in order to determine the position of the actuation of the control element, where a circular movement of the finger around the axis on the surface of the control element leads to different directions of the tilt (strain gauges determines the x-axis and y-axis depending on the swingplatte actuation, page 1 under "Operation characteristics" letter

c), which are recognized as a rotation and led to a micro processor that brings on a cursor movement according to the direction of the finger movement on the surface of the control element (a computer mouse for cursor control on a visual display screen, title).

Bihusch does not specifically teach a soft spring force of less than 40 grams.

However, Kehlstadt teaches a pointing device which provides a spring force of less than 50 grams of pressure (col. 4 lines 39-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have substituted a spring force less than 40 grams of pressure as taught by Kehlstadt in the springs of Bihusch for the purpose of less strain on the finger of the user to provide the variance in pressure needed (col. 4 lines 43-46).

Regarding claim 13, Bihusch discloses wherein a stronger pressure during the actuation along the edge of the control element leads to a faster cursor movement and a weaker pressure along the edge of the control element leads to a slower cursor movement (the speed of the cursor movement of the strain gauges from the springs, page 1 under "Operation characteristic" letter d).

Regarding claim 16, Bihusch discloses wherein a sliding movement of the finger on the surface of the control element is detected solely from the direction of the tilt of an axis by means of force sensors (four strain gauges are positioned to determine the coordinate position when the swingpalette is tilted by applied hand pressure, English abstract and page 1 under "Operation characteristics" letter c).

13. **Claims 2, 4-5, and 7-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Goldenberg et al. (hereafter referenced as Goldenberg), US Patent 6,636,197.

Regarding claim 2, Bihusch discloses a control element according to claim 1, but does not specially teach wherein the control element arranged axially maneuverable within the appliance casing.

However, Goldenberg teaches in Fig. 1 a control element arranged axially maneuverable within the appliance casing (the apparatus mounted within panel 12, col. 3 lines 66-67 to col. 4 lines 1-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have added a casing as taught by Goldenberg around the control element of Bihusch for the purpose of controlling various functions of a device (col. 4 lines 1-3) and for protection to the components of the control element.

Regarding claim 4, Bihusch does not specially teach wherein the control element is equipped with and attached to a rotatable actuation disc.

However, Goldenberg teaches in Fig. 2 a control element is equipped with and attached to a rotatable actuation disc (control knob 26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have attached a rotatable control knob as taught by Goldenberg onto the control element of Bihusch for the purpose of more functionalities to the control device (col. 6 lines 16-31).

Regarding claim 5, Goldenberg disclose wherein the actuation disc (26) is rotatable around an axis (axis A) of the control element and is pivoted and supported over transmission elements (knob pulley 82) on the surface of the control element (col. 7 lines 51-62).

Regarding claim 7, Goldenberg discloses wherein the actuation disc (26) exhibits a structured surface (col. 5 lines 12-15).

Regarding claim 8, Goldenberg discloses wherein the actuation disc (26) exhibits a geometric form tuned to the control element (col. 5 lines 9-18)

Regarding claim 9, Goldenberg discloses in Fig. 2 wherein the actuation disc (26) is shaped like a cap that is mounted easily rotatable on the control element.

14. **Claims 14-15, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kehlstadt as applied to claims 12-13 above, and further in view of Goldenberg.

Regarding claim 14, Bihusch in view of Kehlstadt discloses the method according to claim 12, but does not specifically teaches wherein a menu is selected by actuating the edge of the upper side of the control element, the position of the actuation on the control element leading to a highlighting of a menu item at the corresponding position on a display.

However, Goldenberg discloses wherein a menu is selected (col. 6 lines 1-7) by actuating the edge of the upper side of the control element, the position of the actuation

on the control element leading to a highlighting of a menu item at the corresponding position on a display (Fig. 1 and Fig. 4E, col. 5 lines 47-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have added the functionalities to select a menu as taught by Goldenberg to the control element of Bihusch for the purpose of more functionalities to the control device (col. 6 lines 16-31).

Regarding claim 15, Goldenberg discloses wherein a character repertoire (Fig. 1, col. 6 lines 1-7) is displayed upon actuation of the outer edge of the upper side of the control element, the position of the actuation on the surface of the control element leading to a highlighting of a character at the corresponding position on a display (col. 5 lines 47-56) and the most recently highlighted character is input when the control element is released (col. 4 lines 36-48).

Regarding claim 17, Goldenberg discloses wherein the highlighting of a character can be selected by changing positions during the actuated state of the control element (col. 4 lines 36-48).

15. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Kehlstadt as applied to claims 12-13 above, and further in view of Goren, US Patent 7,190,351.

Regarding claim 18, Bihusch in view of Kehlstadt discloses the method according to claim 13, but does not specially teach wherein the character repertoire

consists of the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen.

However, Gorgen teaches a character repertoire consists of the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen (Fig. 19 and 20 shows an illustration of the character selection interface with control buttons 200-204 and secondary buttons 300-305 displayed on the screen 110. The control buttons 200-204 may be placed on the left hand side while the secondary buttons 300-305 may be placed on the right hand side for the convenience of a handheld with a jog wheel, col. 17 lines 6-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have manipulated the character selection interface as taught by Gorgen to arrange the letters "A" to "M" at the upper edge of the screen and the letters "N" to "Z" at the lower edge of the screen to be in conjunction with the control element of Bihusch as modified by Bihusch for the purpose of rapid selection and with ease (col. 17 lines 6-17).

16. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Nuovo et al. (hereafter referenced as Nuovo), US Design D490,405 S.

Regarding claim 10, Bihusch discloses the Control element according to claim 1, but does not specially teach wherein the control element exhibits tick marks consisting of twelve marks in regular intervals.

However, Nuovo teaches in Fig. 1 a control element exhibits tick marks consisting of twelve marks in regular intervals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have added twelve tick marks in regular intervals as taught by Nuovo to the control element of Bihusch for the purpose of haptic feedback for the user.

17. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bihusch in view of Lee et al. (hereafter referenced as Lee), US Patent 6,804,027.

Regarding claim 11, Bihusch discloses the control element according to claim 1, but does not specially teaches wherein the appliance casing exhibits tick marks next to the edge of the control element consisting of twelve marks in regular intervals where the actuation disc is arranged on the control element.

However, Lee teaches an appliance casing exhibits tick marks next to the edge of the control element consisting of eight marks in regular intervals where the actuation disc is arranged on the control element (Fig. 7, a control knob 701 with tick marks arrange on the housing around the outside of the control knob). It would have been obvious to have twelve tick marks in regular intervals depending on the user's or manufacture's preference.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have combined the housing with tick marks as taught by

Lee with the control element of Bihusch for the purpose of accurate adjustments (col. 4 lines 33-40).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Matke, US Patent 3,005,055, is cited to the dial structure.

Tickle, US Patent 6,850,221, is cited to the input device having different cursor speed depending on the pressure.

Posso et al., US Patent 5,627,531, is cited to the multi-function menu selection device.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao-Quan T. Ho whose telephone number is (571) 270-3264. The examiner can normally be reached on M-F, 7:30 am to 5:00 pm EST, alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh D. Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/526,996
Art Unit: 2629

Page 14

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTH


CHANH D. NGUYEN
SUPERVISORY PATENT EXAMINER